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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DOVE, TRACY MAE

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 08/15/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/696,109

Applicant(s)

BAUER ET AL.

Examiner

Tracy Dove

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 51-90 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 51-90 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

This Office Action is in response to the communication filed on 7/7/03. Applicant's arguments have been considered, but are not persuasive. Claims 51-90 are pending. Claims 1-50 have been canceled. This Action is made **FINAL**, as necessitated by amendment.

Drawings

Applicant has stated the statement "replace informal FIGURES 1-12 with proposed amended FIGURES 1-12" was in error and that the only changes to the drawings were those necessary to convert the drawings from informal drawings to formal drawings. Thus, the drawings filed on 10/28/02 have been approved by the Examiner.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 51-90 are rejected under the judicially created doctrine of double patenting over claims 1-33 of U. S. Patent No. 6,117,594 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: both the application and the patent claim a grid supporting structure having an active material pasted thereto. The grid comprises a lead-based alloy consisting essentially of lead, tin, calcium and silver.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See also MPEP § 804.

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Claims 51-90 are provisionally rejected under the judicially created doctrine of double patenting over claims 30-71 of copending Application No. 09/627,522. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: both the instant application and the copending application claim a grid

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supporting structure having an active material pasted thereto. The grid comprises a lead-based alloy consisting essentially of lead, tin, calcium and silver.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See also MPEP § 804.

Claim Objections

Claim 55 is objected to because of the following informalities: the claim recites “the silver content of the alloy is less than 0.01 percent”, which is inconsistent with claim 51 that recites “silver in the range of about 0.0005 percent to about 0.012 percent”. Claim 55 includes percent values for the silver content below 0.0005%. Appropriate correction is required.

Claim 65 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 79 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 79 recites the phrase “less than about”, which is indefinite. The use of the phrase “less than about” is unclear. For example, claim 79 recites “tin content of the alloy is in the

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range of about 0.8 percent to less than about 1.1 percent” While 1.15% may be considered “about 1.1 percent”, 1.15% is not “less than 1.1 percent”. Thus, it is unclear if the claim encompasses, for example, 1.15% of tin in the lead alloy.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 51-90 are rejected under 35 U.S.C. 102(e)/103(a) as being anticipated by, and alternatively unpatentable over, Larsen et al., US 5,948,566.

Larsen teaches a sealed lead-acid battery (col. 11, lines 35-39) having a positive plate, a negative plate and a separator between the plates (col. 8, lines 20-36). An active material paste is applied to a grid supporting structure to form the positive plate (col. 7, lines 24-43). The positive grid alloy comprises a lead-based calcium-tin-silver alloy in which, based upon the total weight of the alloy, calcium is present in a range of from about 0.01% to 0.06%, tin is present in a range

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of from about 0.3% to 1.0% and silver is present in a range of about 0.01% to 0.06%. Note the ratio of tin to calcium may be greater than 20:1. Optionally, aluminum can be included in an amount from about 0.003% to 0.010%. See col. 11, lines 7-14.

Thus, the claims are anticipated.

The claims are alternatively unpatentable. The claim limitation “formed by book mold gravity casting” is a product-by-process limitation. The courts have ruled that product-by-process limitation, in the absence of unexpected results, are obvious. In re Fessman. Thus, whether the grids are made by gravity casting or direct casting, the lead alloy grids are the same. Furthermore, Larsen at least suggests the grids may be made by gravity casting. Larsen teaches it is known to form grids by gravity casting techniques (col. 2, lines 18-19) and that such grids have been made by utilizing gravity casting and a number of molds (col. 2, lines 38-39).

Regarding the claim limitations “for an SLI battery” (claim 51), “for use in a starting, lighting, and ignition lead-acid battery” (claim 64) and “A lead-acid starting, lighting, and ignition battery” (claim 78), Larsen teaches the grids and plates disclosed therein are useful in any desired lead-acid cell/battery application (col. 3, lines 44-56).

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Claims 51-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen, US 6,423,451.

Larsen teaches a sealed lead-acid cell having a container, a positive plate, a negative plate and a separator between the positive and negative plate (col. 8, lines 30-42). The positive plate comprises a grid and a positive active material pasted onto the grid (col. 8, lines 8-12). Larsen teaches that the grid supporting structure comprises a lead-based alloy consisting essentially of

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lead, from about 0.02% to about 0.05% calcium, from about 1.5% to about 3.0% tin and from about 0.01% to about 0.05% of silver (see abstract). Note the tin to calcium ratio is greater than 20:1. Optionally, the alloys can include from about 0.003% to 0.03% by weight of aluminum (col. 5, lines 8-9). Larsen teaches that the grids may be formed by conventional casting techniques such as gravity casting ("book molds" or the like) and continuous processes using expanded metal techniques (col. 2, lines 25-32 and col. 7, lines 40-47). The grids of Larsen may be used in any lead-acid cell or battery including, for example, automotive (flooded starting, lighting and ignition), bipolar and the like (col. 12, lines 12-17). Table 4 teaches a specific lead based alloy grid having 2.0% tin, 0.006% silver, 0.040% calcium and the balance lead. Note the alloy (Alloy E) has a ratio of tin to calcium of 50:1 (2/0.04).

Larsen does not explicitly disclose a grid supporting structure having the alloy composition of the instant claims.

However, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of "having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium" as obvious over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.). See MPEP 2144.05.

Response to Arguments

Applicant's arguments filed 7/7/03 have been fully considered but they are not persuasive.

Applicant has requested the double patenting rejection be held in abeyance until allowable claims are indicated by the Examiner. No further arguments are provided regarding the double patenting rejection.

The objection to claims 68, 78, 79 and 82 have been withdrawn.

Applicant argues the claims as amended are directed toward a SLI battery and require the grid to be formed by a book mold gravity casting process. However, Larsen '566 teaches the grids and plates disclosed therein are useful in any desired lead-acid cell/battery application (col. 3, lines 44-56). Furthermore, "formed by book mold gravity casting" is a product-by-process limitation. The courts have ruled that product-by-process limitation, in the absence of unexpected results, are obvious.

Regarding Larsen '451, Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is (703) 308-8821. The Examiner may normally be reached Monday-Thursday (9:00 AM-7:30 PM). My supervisor is Pat Ryan, who can be reached at (703) 308-2383. The Art Unit receptionist can be reached at (703) 308-0661 and the official fax numbers are 703-872-9310 (after non-final) and 703-872-9311 (after final).

August 13, 2003


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